METHODS FOR PRODUCTION OF THE OXIDIZED GLUTATHIONE COMPOSITE WITH CIS-DIAMMINEDICHLOROPLATINUM AND PHARMACEUTICAL... Leonid A. Kozhemyakin, et al. Serial No.: 10/747,855 Docket No.: P0633.70014US01 MUI 1 3 ZODA EL 1 5 2004 who have low numbers of neutrophils due to chemotherapy. stimutates the production of neutrophils and is given to patients GM-CSF to pump-out huge amounts of TNF when they are recruited to the scene with TNF-siphs hemorrhage, soften and turn black. Mucrophages begin dastroys cancer cells, but does not hurt healthy cells. Tumors injected of Injury or infection. TNF-alpha In 1996, Biogen received FDA approval to market AVONEX for multiple aderosis. Chart 3: Cytokines Stimulated by Drug warts, Kapost's sarcoma, halry cell le utemia and malignant melanoma. alpha and gamma activates cells effective in treating several forms of hepatitis, genital Interferon is secreted by
8 cells and macrophages
and acts in synergy
with IL-2 to activate eytotoxic T cells.
Natural Killer cells
and Thit cells are also
stimutated to proliferate by IL-12. Interleukin-12 (IL-12) Fig. 27. Cytokines Stimulated by Drug downregulates NPC II expression on antigen presenting cells. It tribusets with II-4 macrophages to inhibit cytokine production to downregulate suppresses cytakine production from T cells and macriphages. It exerts complex to decrease macro-phage infammatory activity. regulatory effects on CD8+T cells, Natural Killer cells, vascular endothellal This type of Thelper cells. It is released by Th2 helper cells and also ce ils and
B lymphocytes.
Il.-10 plays an
Important inVibitory Interleukin-10 role and acts on (I.-16) Infection. Neutrophils are the first line of adhere to vascular endothelbl cells. This helps neutrophils marginate and enter and are found in all areas of infection. endothelial cells secrete IL-8 in order to attract ne utrophila and allow them to the tissue where they are needed, especially during inflammation and defense against invading bacteria is a powerful chemotactic factor for neutrophils. Macrophages and Interfeukin-8 (F-8) number of undescribed ways in infammatory regulation. by IL-6. It also strongly stimulates he patocytes to make acute phase proteins stimulates artibody secretion. Myeloid stam cells are helped to differentiate acts on proliferating

B cells to promote
differentlation into in response to inflammation. This cytokine is always found in increased kevels in sites of inflammation and is likely very important in a is secreted by monocytes, macro-phages and bone marrow cells. It Interleukin-6 (F-6) is released by
Thelper cells of the THZ
subtype and is
particularly active regulatory marrier to decrease the activity of activated macrophages. IL-4 incresses MHC II
expression. On
activated B ce its,
proliferation and on resting and active
B cells. On resting
B cells and on
macrophages differentiation is stimutated and an antibody class switch is induced. A B cell stimulated with IL-4 alone becomes a plasma cell secreting lgE and other allergy-related artibodies. IL-4 acts with IL-10 is an immuno-Interleukin-4 = to II-2 to create
hym phocyte activated
killer on IIs which
are re-injected into the body, then killer ce its will attack the cancer and destory it. or kidney cancer have been retrieved from the body and exposed in the lab cells would receive
IL.7s chemical
mexsage to expand.
For example, by cancer antigens so only those lymphocytes that recognize cancer and stimulates fymphocytes that have already been activated is produced by lymphocytes.
It is a T-cell growth factor T-tymphocytes exposed to malignarid melanoma Interleukin-2 (11-2)finature responses
usually associated
with non-specific
finature response is produced by monocytes, macrophages and dendrific cells. of infection and inflammation, and fever. Interfeukin-1 (IL-1) R activates lymphocytes and thereby regulates